

REMARKS

Claim Rejections 35 U.S.C. § 112, second paragraph

Claims 8-18

The Examiner has rejected claims 8-18 under 35 U.S.C. §112, second paragraph. It is the opinion of the Examiner that the term "critical dimension" in claim 8 is a relative term which renders the claim indefinite. It is further the opinion of the Examiner that the term "critical dimension" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention.

Applicant respectfully disagrees with the Examiner. Applicant has amended claim 8. Support is provided in paragraph 30 of the specification.

Claim 8, as amended, of Applicant's claimed invention claims a process of forming a multilayer stack (250) including: obtaining a substrate (100), the substrate including devices having features with a critical dimension; depositing a first thin film (210) on the substrate with a first precursor including a first set of organic components, the first thin film having a thickness that is less than about 20.0% of the critical dimension; treating the first thin film to release the first set of organic components to leave a first set of pores (115); depositing a second thin film (220) over the first thin film with a second precursor including a second set of organic compounds, the second thin film having a thickness (221) that is less than about 20.0% of the critical dimension; treating the second thin film to release the second set of organic components to leave a second set of pores; and

alternately depositing and treating further thin films to obtain a desired thickness for said multilayer stack. See Figure 1. Also, see Figures 3a-3f.

One of ordinary skill in the art at the time the invention was made would have understood the term “critical dimension”.

Havemann et al. (US 5,488,015, of record) teaches that “shrinking the feature size on a given circuit from 0.5 microns to 0.25 microns can increase power consumption by 30%”. See Col. 1, lines 23-24.

Gnade et al. (US 5,561,318, of record) also teaches that “shrinking the feature size on a given circuit from 0.5 microns to 0.25 microns can increase power consumption by 30%”. See Col. 1, lines 49-51.

Sikonia (US2002/0076543) teaches that “as the size of functional elements in integrated circuits decreases, complexity and interconnectivity increases.” See paragraph 2.

Laxman et al. (US2002/0172766) teaches that “in order to produce faster and more power efficient microelectronics with smaller device geometries...” See paragraph 6.

The specification describes an example: if the devices have features with a critical dimension (CD) of about 70 nanometers (nm), the thin film thickness (221) should be less than about 14 nm. See paragraph 13, including lines 27-30, on page 5 of the specification.

Thus, claim 8 does, in fact, particularly point out and distinctly claim the subject matter which the Applicant regards as his invention.

Claims 9-18 of Applicant’s claimed invention are dependent on claim 8, as amended.

Thus, claims 9-18 also do, in fact, particularly point out and distinctly claim the subject matter which the Applicant regards as his invention.

In view of the foregoing, Applicant respectfully requests the Examiner to withdraw the rejections to claims 8-18 under U.S.C. §112, second paragraph.

Applicant believes that all claims pending, including claims 8-18, in Applicant's claimed invention, are now in condition for allowance so such action is earnestly solicited at the earliest possible date.

Should there be any additional charge, please charge Deposit Account No. 02-2666.

If a telephone interview would in any way expedite the prosecution of this application, the Examiner is invited to contact the undersigned at (408) 720-8300.

Respectfully submitted,

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